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SERIAL NO. 09/659,375

DOCKET NO. 1539.1002RE/JGM/DMP

turning mirror M_0 is placed between the single-pass lens group A_1 and the double-pass lens group A_2 . The turning mirror M_0 permits the reticle R and the wafer W to be in parallel planes. As shown in FIG. 5, the reticle R and the wafer W are along the same optical axis
310.—

REMARKS

INTRODUCTION:

In accordance with the foregoing, the specification has been amended to improve form.

No new matter is being presented, and approval and entry of the foregoing amendment is respectfully requested.

Claims 1-57 are pending and under consideration. Reconsideration is requested.

REJECTION UNDER 35 U.S.C. §251:

In the Office Action at pages 2-3, the Examiner rejects claims 1-57 as being based upon a defective reissue declaration. Specifically, the Examiner asserts that the declaration is defective for the following reasons:

- A. the declaration does not state that the inventor is the sole inventor as required under 37 C.F.R. §1.63(a);
- B. the declaration refers to the specification attached hereto when the declaration appears to have been signed after filing of the Reissue Application;

- C. the error relied upon is not an error upon which a reissue can be based since the Examiner asserts that the new claims are narrower than the original claims; and
- D. the new claims present additional features and that no linking claim exists to provide a unity of invention.

This rejection is respectfully traversed and reconsideration is requested.

A. The Declaration Is Compliant With 37 CFR §1.63(a)

On page 2 of the Office Action, the Examiner states that the declaration is not in compliance with 37 C.F.R. §1.63(a) as it does not recite that the inventor is the "sole" inventor. As a point of clarification, it is noted that the Examiner appears to be relying on an older standard required in the version of 37 C.F.R. §1.63(a) existing prior to November 7, 2000. In this version, the inventor was required to assert "whether the inventor is a sole or joint inventor of the invention claimed." In contrast, under the new standard as of November 7, 2000, 37 C.F.R. §1.63(a) no longer requires that the inventor assert whether the inventor is a sole or joint inventor. Instead, a declaration complies with the new 37 C.F.R. §1.63(a) if it meets the following requirements:

- (1) Be executed, *i.e.*, signed, in accordance with either § 1.66 or §1.68. There is no minimum age for a person to be qualified to sign, but the person must be competent to sign, *i.e.*, understand the document that the person is signing;
- (2) Identify each inventor by full name, including the family name, and at least one given name without abbreviation together with any other given name or initial;
- (3) Identify the country of citizenship of each inventor; and

(4) State that the person making the oath or declaration believes the named inventor or inventors to be the *original and first inventor* or inventors of the subject matter which is claimed and for which a patent is sought.
(Italics mine)

By way of review, in paragraph 2 of the declaration filed November 21, 2000, the inventor states that he is "the original, first inventor." As such, it is respectfully submitted that, as the requirement that the inventor identify whether the inventor is a sole or joint inventor appears to have been eliminated, it is respectfully submitted that the declaration filed November 21, 2000 is compliant with 37 C.F.R. §1.63(a) in force as of November 7, 2000.

Notwithstanding, if the Examiner remains convinced that the Declaration still needs to be amended, the Applicant will supply a Supplemental Declaration at the request of the Examiner.

B. The Declaration Refers To The Originally Filed Reissue Application Within
The Meaning Of The Rule

On page 2 of the Office Action, the Examiner states that the declaration is further not in compliance with the requirements of 37 C.F.R. §1.63 as it does not refer to the originally filed application. It appears that the Examiner is referring to the requirement in 37 C.F.R. §1.63(b)(1) that the Declaration "[i]dentify the application to which it is directed." The Examiner's attention is respectfully brought to the header of the declaration, which discloses that the "Reissue Application for U.S. Patent No. 5,805,334 issued September 8, 1998" is "U.S. Serial No.: 09/659,375" that was "Filed: September 8, 2000." As such, the declaration

does "identify the application to which it is directed" as required by 37 C.F.R. §1.63(b)(1).

Further, while paragraphs 2 and 3 refer to an attached specification, the specification that was attached to the declaration was the specification referred to in the header of the declaration. As the specification had already been filed on September 8, 2000, the specification was not re-filed with the declaration in order to prevent confusion by creating duplicate copies.

Notwithstanding, if the Examiner remains convinced that the Declaration still needs to be amended, the Applicant will supply a Supplemental Declaration at the request of the Examiner.

C. The Declaration Relies Upon An Error For Which A Reissue Application Can Be Granted Since New Claims Are Broader Than Original Patent Claims

On page 2 of the Office Action, the Examiner asserts that the use of the term "dioptric" makes the newly presented claims necessarily narrower than the original patent claims. However, it is unclear how the mere addition of the term "dioptric" necessarily narrows the newly presented claims such that the overall scope of the newly presented claims are now narrower than the patent claims.

By way of review, newly presented independent claim 27 recites "a dioptric imaging sub-system arranged in an optical path between said catadioptric imaging optical sub-system and the substrate to re-image the image formed by said catadioptric imaging optical sub-system, said

dioptric imaging sub-system comprising a second optical axis." In contrast, the original patent claim 1 recites "a second imaging system that receives the light reflected by the first turning mirror and that re-images the intermediate image to form a final image of the illuminated region of the reticle on the substrate." Even assuming arguendo that the recited dioptric imaging sub-system of claim 27 is narrower than the second imaging system recited in original claim 1, it is respectfully submitted that this assumed narrowing of a single limitation does not render the scope of claim 1 broader than the scope of claim 27.

Further, new claim 27 recites "a catadioptric imaging optical sub-system comprising an optical group to form an image of the pattern, the optical group comprising a concave mirror with a first optical axis." This limitation is significantly broader than the recited first imaging system of claim 1, which recites a specific catadioptric system comprising, "in order from the reticle and along an optical axis of the first imaging system,

(a) a single-pass lens group comprising a first negative subgroup, a positive subgroup, and a second negative subgroup, and

(b) a double-pass lens group comprising a concave mirror,

wherein light from the illuminated region of the reticle

passes through the single-pass lens group and the double-pass lens group,
reflects from the concave mirror, and
returns through the double-pass optical group."

As such, the recited catadioptric imaging optical sub-system of claim 27 is clearly much

broadener than that in claim 1 due at least to claim 27 not reciting the specific groupings of lenses and the path of the light within the catadioptric imaging optical sub-system.

As a general matter, a broadening reissue requires that the scope of the newly presented claims be broader than the scope of the original patent claims. Further, a newly presented claim in a reissue may still be deemed broader than the original patent claim where the newly presented claim is narrower in some aspects, but broader in others. As noted by MPEP 1412.03, the test for whether a newly added claim is broader than the original patent claims is whether the "newly added claim in the reissue contains within its scope any conceivable apparatus or process which would not have infringed the patent, then that reissue claim would be broader than the patent claims."

Under this standard, even assuming *arguendo* claim 27 is narrower than claim 1 with regard to the dioptric imaging sub-system, claim 27 is much broader than claim 1 with regard to the catadioptric imaging optical sub-system. For instance, a catadioptric imaging optical system comprising a catadioptric imaging optical sub-system lacking the single pass or double pass lens groups, but having an optical group with a concave mirror and a first optical axis and a dioptric imaging sub-system would likely infringe claim 27, but would not likely infringe claim 1 or the remaining patent claims. Thus, it appears that claim 27 meets the standard outlined in MPEP 1412.03 since devices that would infringe the newly presented claims would not otherwise appear to infringe the patent claims.

As the Examiner has not provided additional evidence that claim 27 and the other newly

presented independent claims are narrower than the original patent claims beyond the statement that the newly presented claims use the term "dioptric" in one limitation, it is respectfully submitted that, contrary the assertion of the Examiner, the declaration is deemed proper due at least to its properly relying on an error in that the original patent claims were unduly narrow.

D. The Declaration Relies Upon An Error For Which A Reissue Application Can Be Granted Since New Claims Are Supported By The Existing Specification

On pages 2-3 of the Office Action, the Examiner states that there is no linking claim indicating a unity of invention, and that the newly presented claims are directed to separate features of the invention. The Examiner points to Suenaga et al. (U.S. Patent No. 5,668,673) as evidence that, but for the "dioptric" limitation, the newly presented claims would be anticipated by the disclosed invention in FIG. 7 of Suenaga et al. As such, the Examiner is of the belief that the newly presented claims are directed to subject matter entirely distinct from the anything earlier claimed, attempted, or intended to be claimed.

As a point of clarification, the unity of invention between the newly presented claims and the original patent claims is not the standard by which the "intent to be claimed" is measured. Instead, unity of invention pertains to restriction requirements as discussed in MPEP 800. Instead, the intent to be claimed requirement is generally discussed in MPEP 1412.01, which states that claims "presented in a reissue application are considered to satisfy the requirement of 35 U.S.C §251 that the claims be 'for the invention disclosed in the original

patent' where: (A) the claims presented in the reissue application are described in the original patent specification and enabled by the original patent specification such that 35 U.S.C §112 first paragraph is satisfied; and (B) nothing in the original patent specification indicates an intent not to claim the subject matter of the claims presented in the reissue application."

While the Examiner relies upon In re Weiler, et al., 229 USPQ 673 (Fed. Cir. 1986) as supporting the proposition that there must be a unity of invention, it is respectfully noted that In re Weiler, et al. presented a situation where an applicant in a reissue application attempted to add claims that, during the pendency of the application, had been restricted from the application. The Court held that, since the applicant failed to timely file a divisional application during the pendency of the application, that the applicant was not allowed to cure this error in a reissue application since, as evidenced by the restriction requirement, the reissue application was not directed to the same invention.

Further, a later court case, In re Amos, 21 USPQ2d 1271 (Fed. Cir. 1991), limited In re Weiler, et al. in holding that the intent to claim the same invention "has little to do with 'intent' per se, but rather is analogous to the requirement of §112, first paragraph that the specification contain a "written description of the invention It is ... synonymous with 'right to claim.'" In re Amos, 21 USPQ2d at 1274. It is from this later case that MPEP 1412.01 appears to derive its test, which notably does not require a unity of invention, but merely that the written description support the claims.

As such, even assuming arguendo that there is no "linking claim," in order to show that

there was no intent to claim the same invention, the Examiner must show that the newly presented claims are not enabled by the specification, and that the specification discloses an intent not to claim the subject matter. While the Examiner has not made such a showing, the Examiner's attention is directed to FIG. 5 and page 8, lines 62-67 and page 9, lines 1-22, which the applicant respectfully submits discloses a catadioptric imaging optical sub-system (first imaging system A) and a dioptric imaging sub-system (second imaging system B) sufficient for the newly presented claims to comply with the requirements of 35 U.S.C. §112, paragraph 1.

As there is no evidence that the newly presented claims are not otherwise in compliance with 35 U.S.C. of §112, first paragraph, and as there was no restriction requirement during the prosecution history of the original patent application or any other evidence in the specification that there was no intent to claim the subject matter, it is respectfully submitted that the newly presented claims are in compliance with the requirements of 35 U.S.C. of §251 due at least to there being an intent to claim the newly presented claims.

ATTACHMENT:

Attached hereto is a "Version With Markings to Show Changes Made," comprising a marked-up version of changes made to the Specification by the current amendment.

SERIAL NO. 09/659,375

DOCKET NO. 1539.1002RE/JGM/DMP

CONCLUSION:

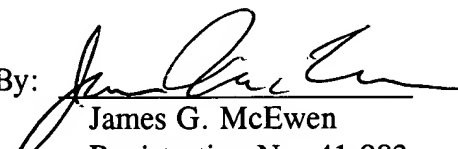
In accordance with the foregoing, it is respectfully submitted that all outstanding objections and rejections have been overcome and/or rendered moot. And further, it is respectfully submitted that all pending claims patentably distinguish over the prior art. Thus, there being no further outstanding objections or rejections, the application is submitted as being in condition for allowance which action is earnestly solicited.

If the Examiner has any remaining issues to be addressed, it is believed that prosecution can be expedited by the Examiner contacting the undersigned attorney for a telephone interview to discuss resolution of such issues.

If there are any additional fees associated with the filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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Date: April 12, 2001

VERSION WITH MARKING TO SHOW CHANGES MADE

IN THE SPECIFICATION

Please AMEND the first full paragraph on page 9, as follows:

--The turning mirror M_2 directs the light from the illuminated region of the reticle R along the optical axis **310** which is an optical axis of the second imaging system B as well as of the single-pass lens group A_1 . The second imaging system B receives light from the turning mirror M_2 and re-images the intermediate image onto a corresponding region **331** on the wafer W. As will be apparent, the second embodiment differs from the first embodiment in that the turning mirror M_0 is placed between the single-pass lens group A_1 and the double-pass lens group A_2 . The turning mirror M_0 permits the reticle R and the wafer W to be in parallel planes. As shown in FIG. 5, the reticle R and the wafer W are along the same optical axis **[312] 310**.--